

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 April 2005 (21.04.2005)

PCT

(10) International Publication Number
WO 2005/035655 A1

(51) International Patent Classification⁷: C08L 65/00,
81/08, C09D 165/00, 181/08, C08L 31/04, C09D 131/04,
A61N 1/05, A61B 5/03

(21) International Application Number:
PCT/GB2004/004244

(22) International Filing Date: 7 October 2004 (07.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0323733.6 10 October 2003 (10.10.2003) GB

(71) Applicant (for all designated States except US): HERIOT-WATT UNIVERSITY [GB/GB]; Edinburgh EH14 4AS (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DANIEL, Abraham [IN/GB]; 1 Beechbank Place, Galashiels TD1 2BH (GB). FOTHERINGHAM, Alexander [GB/GB]; 7 Station Yard, Clovenfords TD1 3LT (GB).

(74) Agents: SZCZUKA, Jan, Tymoteusz et al.; Marks & Clerk, 19 Royal Exchange Square, Glasgow G1 3AE (GB).

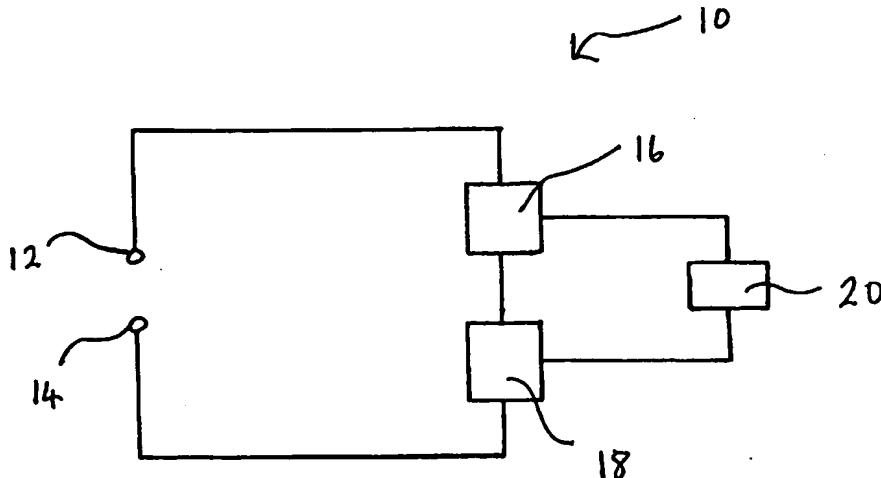
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

{Continued on next page}

(54) Title: CONDUCTIVE POLYMER



WO 2005/035655 A1

(57) Abstract: This invention relates to an intrinsically conducting polymer (ICP), a plastics based electrode and a method for making such an electrode. In particular, the plastics based electrode comprises a plastic strip of cellulose acetate acting as a substrate with a thin coating of intrinsically conducting poly (3,4-ethylenedioxythiophene) and poly (4-styrenesulphonate) (i.e. PEDOT/PSS) polymer comprising an amount of vinylacetate/ethylene copolymer. The plastics based electrode may be used in apparatus for the detection of dental caries.